LOGISTICS ACQUISITION, AN EMPHASIS ON PLANNING FOR PERFORMANCE

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ACQUISITION LOGISTICS

- Acquisition Reform
  - Today's New Emphasis
    - Evolutionary Acquisition
      - Spiral or Incremental Development
- Systems Engineering
- Logistics Management Information (LMI)
  - Supportability as a Performance Requirement
  - A Logistics Management Process

SYSTEMS ENGINEERING - THE BOTTOM LINE

- Systems Engineering with Acquisition Logistics as part of the Team.
  - A total engineering effort to meet cost, schedule, supportability, and technical performance.
  - A life-cycle activity.

SYSTEMS ENGINEERING PROCESS

- The principles of systems engineering:
  - Know the problem, the customer, and the consumer.
  - Criteria should be measurable (objective and quantifiable)
  - Establish and manage requirements.
  - Identify and assess alternatives.
  - Verify and validate requirements. **Design quality in**.
  - Maintain the integrity of the system.
  - Use an articulated and documented process and readily available automated tools.

PLANNING FOR LOGISTICS

- Acquisition Logistics
  - Emphasis is on Planning.
  - Need is to incorporate Guidance.
  - Goal is to meet Logistics Requirements.
    - Be Responsive
      - Reduce Redundancies
      - Enhance what is available
      - Be flexible and innovative
      - Technology insertion
      - Effective Management

LOGISTICS MANAGEMENT INFORMATION (LMI)

- Logistics Management Information
  - Defines acquisition logistics guidance to identify program requirements.
  - A “road map” to acquire logistics.
  - Provides guidance on system supportability assessment and analysis.
  - Tailoring Program Requirements

SUPPORTABILITY

- “The capability of a total system design to support operations and readiness needs throughout the systems service life at an affordable cost.”
- Integrated analysis.
- Primary element in logistics support.
- Balance design objectives with supportability concerns.

PERFORMANCE BASED LOGISTICS

- Performance Based Strategies
- Performance Based Logistics contracting:
  - State requirements in terms of results.
  - Define functional rather than detailed requirements.
  - Develop criteria and metrics that measure performance and verify compliance.
    - Achievable
    - Relevant

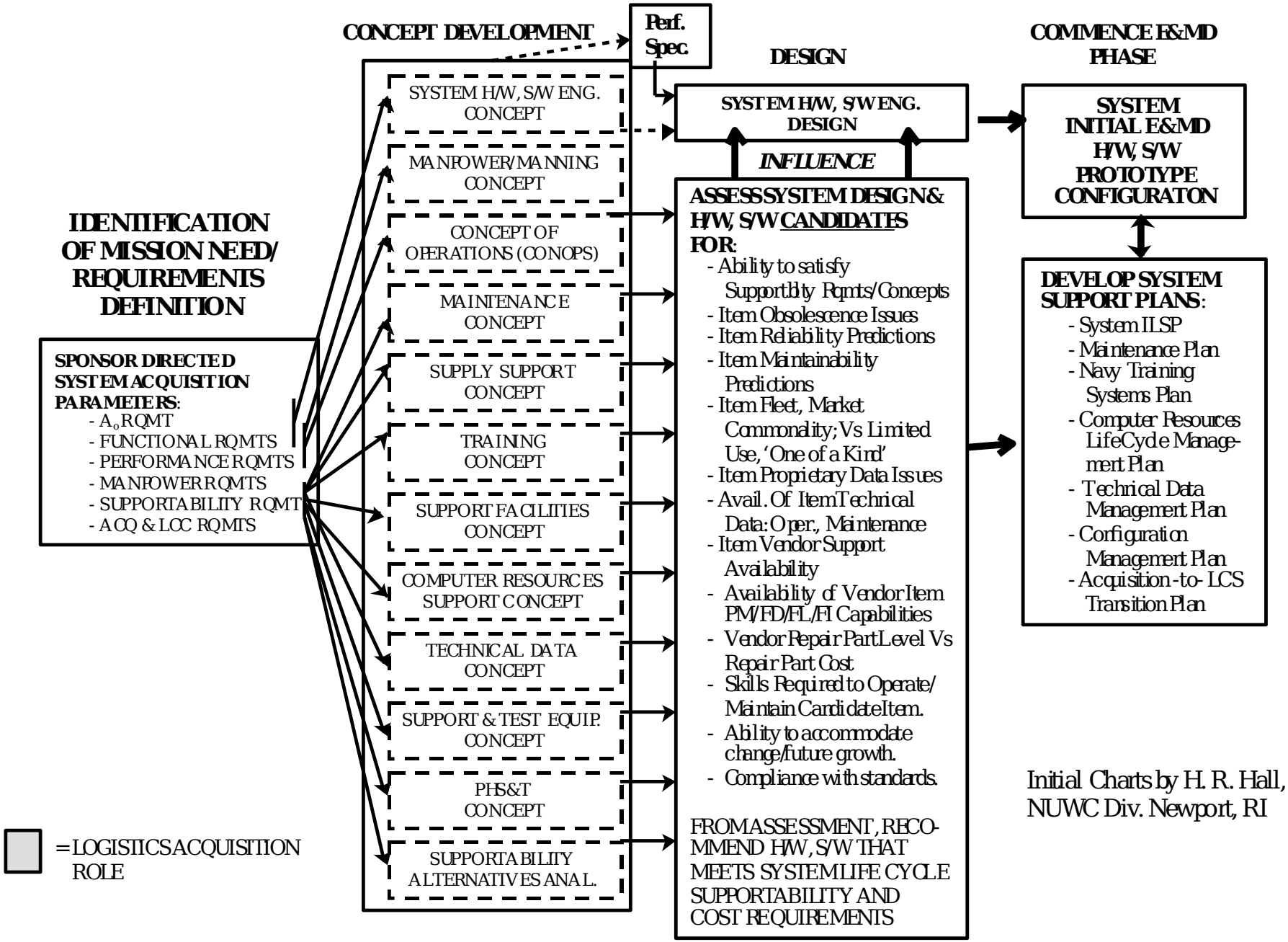
A LOGISTICS MANAGEMENT SYSTEM

- Logistics Management Supportability Analysis (LMSA)
  - Efficient and Cost Effective.
  - Provides a **baseline** start, process to accumulate data, look at trends, investigate cause and effects, compare data, establish performance levels.
  - Flexible and Tailorable.

SYSTEM/LMSA PROCESS CHARTS

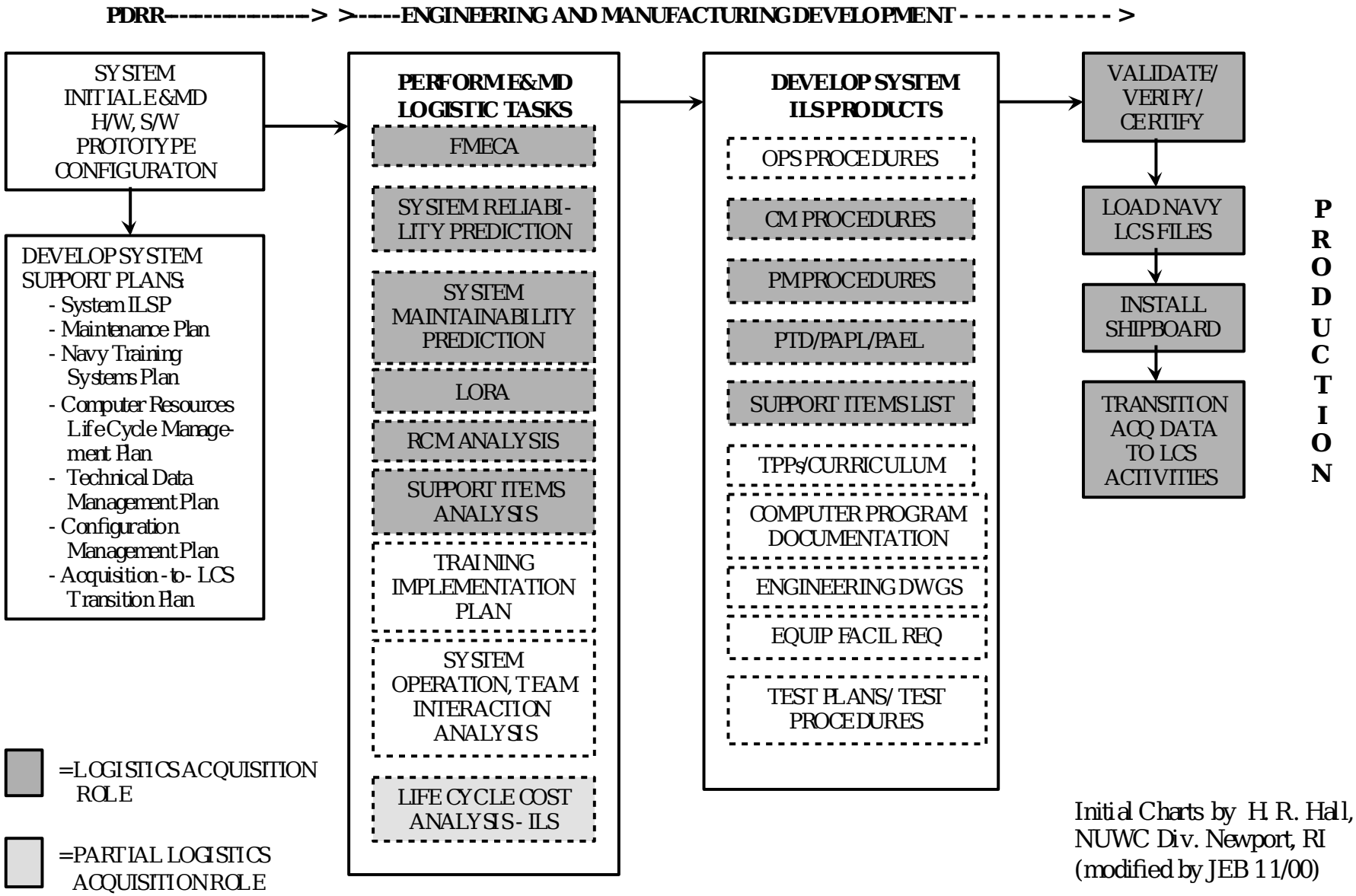
- Figure 1 - Full Systems Process Chart
- Figure 2 - Tailored LMSA Process Chart

Figure 2: LMSA Process/LMSAS Coverage, Part 1 of 2


CONCEPT DEVELOPMENT
Perf. Spec.
DESIGN
COMMENCE E&MD PHASE
IDENTIFICATION OF MISSION NEED/ REQUIREMENTS DEFINITION
SPONSOR DIRECTED SYSTEM ACQUISITION PARAMETERS:
- A_o RQMT
- FUNCTIONAL RQMTS
- PERFORMANCE RQMTS
- MANPOWER RQMTS
- SUPPORTABILITY RQMT
- ACQ & LCC RQMTS
SYSTEM H/W, S/W ENG. CONCEPT
MANPOWER/MANNING CONCEPT
CONCEPT OF OPERATIONS (CONOPS)
MAINTENANCE CONCEPT
SUPPLY SUPPORT CONCEPT
TRAINING CONCEPT
SUPPORT FACILITIES CONCEPT
COMPUTER RESOURCES SUPPORT CONCEPT
TECHNICAL DATA CONCEPT
SUPPORT & TEST EQUIP. CONCEPT
PHS&T CONCEPT
SUPPORTABILITY ALTERNATIVES ANAL.
SYSTEM H/W, S/W ENG. DESIGN
INFLUENCE
ASSESS SYSTEM DESIGN & H/W, S/W CANDIDATES FOR:
- Ability to satisfy Supportblity Rqmts/Concepts
- Item Obsolescence Issues
- Item Reliability Predictions
- Item Maintainability Predictions
- Item Fleet, Market Commonality; Vs Limited Use, 'One of a Kind'
- Item Proprietary Data Issues
- Avail. Of Item Technical Data: Oper., Maintenance
- Item Vendor Support Availability
- Availability of Vendor Item PM/FD/FL/FI Capabilities
- Vendor Repair Part Level Vs Repair Part Cost
- Skills Required to Operate/ Maintain Candidate Item.
- Ability to accommodate change/future growth.
- Compliance with standards.
FROM ASSESSMENT, RECOMMEND H/W, S/W THAT MEETS SYSTEM LIFE CYCLE SUPPORTABILITY AND COST REQUIREMENTS
SYSTEM INITIAL E&MD H/W, S/W PROTOTYPE CONFIGURATON
DEVELOP SYSTEM SUPPORT PLANS:
- System ILSP
- Maintenance Plan
- Navy Training Systems Plan
- Computer Resources Life Cycle Management Plan
- Technical Data Management Plan
- Configuration Management Plan
- Acquisition-to-LCS Transition Plan
= LOGISTICS ACQUISITION ROLE

Initial Charts by H. R. Hall, NUWC Div. Newport, RI

Figure 2: LMSA Process/LMSAS Coverage, Part 2 of 2



Initial Charts by H. R. Hall, NUWC Div. Newport, RI (modified by JEB 11/00)

VISION VS. REALITY

- Navy System Support Vision
  - Concurrent Engineering and Logistics Support
  - Central Supply Point
  - Effective Teaming from Cradle to Grave
  - Commercial Off-The-Shelf Equipment
  - Minimal Support
  - Technology Refreshes
  - Elimination of R&D and Traditional Support
- Logistics Management System Reality Check
  - Example
- Total Ownership Cost

CONCLUSION

- An effective Acquisition Logistics approach.
- Systems Engineering to include hardware, software, and planned Logistics resources.
- Assess Supportability.
- Measure Performance not detail.
- An effective Logistics Management System for program life-cycle support.